

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. - 26. (Cancelled)

27. (New) A method of providing a decompressed data word to a processor comprising:

receiving a code word;

identifying one or more dictionaries and one or more addresses based upon the code word;

retrieving one or more particular words from the one or more dictionaries based upon the one or more addresses;

calculating the decompressed data word from the one or more particular words;

and

forwarding the decompressed data word to the processor for further processing.

28. (New) The method of claim 27, wherein the step of identifying one or more dictionaries and one or more addresses further comprises:

identifying one or more dictionaries based upon the header of the code word; and

identifying one or more addresses for one or more particular words based upon the one or more bit streams.

29. (New) The method of claim 28, wherein the step of identifying the one or more dictionaries based upon the header of the code word further comprises:

identifying a short primary dictionary when the header corresponds to a first value;

identifying a normal primary dictionary when the header corresponds to a second value;

identifying a normal primary dictionary and a short difference dictionary when the header corresponds to a third value; and

identifying a normal primary dictionary and a normal difference dictionary when the header corresponds to a fourth value.

30. (New) The method of claim 28, wherein the step of identifying one or more addresses for one or more particular words further comprises:

identifying a first address for a first particular word based upon a first bit stream;
and

identifying a second addresses for a second particular word based upon a second bit stream.

31. (New) The method of claim 30, wherein the step of retrieving the one or more particular words from the one or more dictionaries further comprises:

retrieving the first particular word from a normal primary dictionary based upon the first address; and

retrieving the second particular word from a short difference dictionary based upon the second address.

32. (New) The method of claim 30, wherein the step of retrieving the one or more particular words from the one or more dictionaries further comprises:

retrieving the first particular word from a normal primary dictionary based upon the first address; and

retrieving the second particular word from a normal difference dictionary based upon the second address.

33. (New) The method of claim 31, wherein the step of calculating the decompressed data word from the one or more particular words further comprises:

calculating the decompressed data word from the first particular word and the second particular word.

34. (New) The method of claim 32, wherein the step of calculating the decompressed data word from the one or more particular words further comprises:

calculating the decompressed data word from the first particular word and the second particular word.

35. (New) The method of claim 27, wherein the step of calculating the decompressed data word from the one or more particular words further comprises:

performing a logical operation on the one or more particular words to produce the decompressed data word .

36. (New) The method of claim 35, wherein the step of performing the logical operation on the one or more particular words further comprises:

performing an exclusive-OR function on the one or more particular words to produce the decompressed data word.

37. (New) A computer system, comprising:

a processor configured to perform operations based on an instruction set;

a memory device including one or more dictionaries; and

a decompression engine, wherein the decompression engine

receives a code word, wherein the code word includes a header and one or more bit streams,

identifies one or more addresses of the memory device for one or more particular words based upon the one or more bit streams,

retrieves one or more particular words from the memory device based upon the one or more addresses;

calculates a decompressed data word from the one or more particular words, and

forwards the decompressed data word to the processor for further processing.

38. (New) The system of claim 37, wherein the one or more dictionaries includes at least one of:

- a short primary dictionary,
- a normal primary dictionary,
- a short difference dictionary, and
- a normal difference dictionary.

39. (New) The system of claim 37, wherein the decompression engine accesses a short primary dictionary when the header corresponds to a first value; accesses a normal primary dictionary when the header corresponds to a second value; accesses the normal primary dictionary and a short difference dictionary when the header corresponds to a third value; and accesses the normal primary dictionary and a normal difference dictionary when the header corresponds to a fourth value.

40. (New) The system of claim 39, wherein the decompression engine identifies a first address for a first particular word based upon a first bit stream; and identifies a second addresses for a second particular word based upon a second bit stream.

41. (New) The system of claim 40, wherein the decompression engine retrieves the first particular word from the normal primary dictionary based upon the first address; and retrieves the second particular word from the short difference dictionary based upon the second address.

42. (New) The system of claim 40, wherein the decompression engine retrieves the first particular word from the normal primary dictionary based upon the first address; and retrieves the second particular word from the normal difference dictionary based upon the second address.

43. (New) The system of claim 41, wherein the decompression engine calculates the decompressed data word from the first particular word and the second particular word.

44. (New) The system of claim 42, wherein the decompression engine calculates the decompressed data word from the first particular word and the second particular word.

45. (New) The system of claim 37, wherein the decompression engine performs a logical operation on the one or more particular words to produce the decompressed data word.

46. (New) The system of claim 45, wherein the logical operation includes an exclusive-OR function.